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A

TREATISE

ON THE INFLUENZA

OF 1837,

CONTAINING AN ANALYSIS OF ONE HUNDRED CASES,

OBSERVED AT BIRMINGHAM,

Between the 1st of January and the 15th of February,

BY

PEYTON BLAKISTON, M. A., MED. LIC. CANTAB.,

PHYSICIAN TO THE BIRMINGHAM DISPENSARY AND TO THE MAGDALEN ASYLUM,

AND LATE FELLOW OF EMANUEL COLLEGE, CAMBRIDGE.

"By our constitution, we have a strong propensity to trace particular *facts* and "*observations* to general rules, and to apply such general rules to account for other "effects, or to direct us in the production of them. This procedure of the understand-"ing is familiar to every human creature in the common affairs of life, and it is the "only one by which any real discovery in philosophy can be made."—*Reid's Inquiry into the Human Mind*, p. 18.

LONDON:

LONGMAN, REES, ORME, BROWN, GREEN AND LONGMAN,

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INTRODUCTION.

The following treatise is written with a view of furnishing a picture of the Epidemic of 1837, as it fell under the Author's observation. It lays no claim to be considered as a history of the disease, as the practice of a single physician cannot furnish the materials necessary for such a work. For this reason no attempt has been made either to institute a comparison between this complaint and the epidemic of former years, or to detail the peculiarities of the season which preceded its appearance. Leaving it to others to digest this and similar reports from other places into a history of the disease, the author has confined himself to the simple task of recording *facts* which he has endeavoured to observe accurately and to report faithfully; deducing such conclusions alone as appear incontestibly to result from their analysis. Thus, although the stamp of originality and talent be wanting, yet it is hoped that through these pages some benefit may accrue to medical science; which is found to progress surely and rapidly in proportion as its cultivators, laying aside ingenious speculations and fanciful theories, confine themselves to the observation and record of facts, and thus furnish the materials from which a sound and inductive philosophy may extract the truth.

Surrounded by an immense population, and attached to a public Institution, from which the sick are visited (if necessary) at their own houses, the author was called upon to attend nearly two hundred persons labouring

under Influenza, between the 1st of January and the 15th of February, 1837. Great numbers being ill at the same time, he found it impossible to take accurate notes of more than one hundred cases, which form the basis of this work. In all these cases percussion and auscultation of the chest have been carefully practised, and the results noted.

Early in December, 1836, the author was requested to attend a young gentleman, 15 years of age, whom he found labouring under an attack of what appeared to be nervous fever, with the addition of a common catarrh. The digestive organs seemed but little impaired, the cough was not very severe, and the nervous symptoms such as giddiness, headache, lassitude, and pain in the limbs were the first to appear, and seemed to predominate. The temperature of the skin was but slightly raised, and the pulse never exceeded 90 in the minute. He soon recovered under the mildest possible treatment. Towards the latter end of the month a somewhat similar case occured in a lad aged 13, in which the irritation of the lining membrane of the bronchial tubes was carried to a higher degree. Some counter-irritation in addition to the simple treatment pursued in the former case restored the patient to health in about three weeks.

Bronchitis being the most prevalent complaint of this town, the author was induced to consider these attacks as common fever, modified by the climate of the place. During the illness, however, of the last named patient, the cases multiplied with great rapidity, and it was soon apparent that an epidemic was raging.

The subject is divided into three sections:—The first contains six cases as types of the disease when it attacked persons previously in good health. The second contains ten cases in which the Influenza was modified by pre-existing disease, and two cases in which it was succeeded by another disease. The third section contains an analysis of the symptoms and treatment in all the cases. The word

fever, being very indefinite, has been avoided as much as possible, but the different symptoms which are supposed to indicate its presence are given.

One case terminated fatally, and it is much to be regretted that permission to inspect the body could not be obtained. It is right, however, to mention that two other persons in the author's practice died, females of the respective ages of 78 and 50. These cases are not among the one hundred analysed in this work, because no notes were taken of them; indeed owing to his own illness the author did not see them until the day before their deaths.

One great advantage arising from the publication of individual cases in the description of disease is, that the medical reader can in a great measure form his own judgment of the nature of the disease, and of the suitableness of the treatment employed. He will adopt such conclusions alone as seem to him irresistible, and he will on future occasions be enabled to compare cases he may be called upon to attend, with those which have been recorded in works written on a similar plan to this which is now submitted to the public. The author has been insensibly led into one or two digressions, more particularly in summing up the signs furnished by percussion and auscultation of the chest. They have arisen from a desire that nothing should be omitted from which any useful conclusion might be deduced. For this and for the numerous defects scattered through these pages he must crave the indulgence of the medical profession, which has never been backward in encouraging the humble efforts of its members to furnish materials for the elucidation of truth.

TREATISE,

&c.

SECTION I.

THE DISEASE AS IT OCCURRED IN HEALTHY PERSONS.

CLASS I.

Cough, followed by Lassitude, Pains in the Limbs, &c.

CASE 1.—Alfred Hinton, æt. 32, servant, Great Charles-street, Birmingham.

Being previously in good health, on January 26, felt a tickling and rawness in the throat, the sure forerunner of a cold on the chest with him. At this time the bowels were regular. [*Warm foot bath.—Pulv. Antim. comp.* gr. iij. *horâ somni.*]

Jan. 27. Cough much increased; chest is very sore, particularly upon coughing; expectoration is scanty and difficult. In the afternoon headache came on, with much weariness; respiration 22, clear and vesicular; pulse 76, feeble and soft. [*Diluent drinks.—Warm foot bath.—Pulv. Antim. comp.* gr. iij. *horâ somni.*]

28. Passed a restless night, and perspired at times; cough is now very troublesome, accompanied by soreness and constriction of the chest; feels great weariness and aching pains in the back and limbs; headache is very severe, particularly over the eyes; tongue covered with a white fur;

bowels still regular; no appetite; pulse 84, sharp and small; skin dry; respiration 24, natural. [*Diluent drinks.—Tinct. Hyoscyami*, ʒ j. *Aquæ*, ℥ j. *horâ somni.—Pulv. Antim. comp.* gr. iij. *horâ somni.*]

29. Has passed a much better night; the headache, and the tightness of the chest have almost disappeared; cough is loose, with expectoration of thick white mucus; appetite good; pulse 72, feeble; skin natural. [*Perstet in usu Tinct. Hyoscyami.*]

31. The pain in the head and chest is entirely gone; has now a cold in the head; nose is stopped up; offensive smell and taste; little or no appetite; stools very light coloured; *excessive* lassitude and debility, with very low spirits. [*Pil. Hydrag.* gr. v. *omni nocte.*]

Nearly ten days elapsed from this time before this patient recovered his appetite, strength, and spirits.

Similar to this case were four others, three males, aged 26, 35 and 45; and one female, aged 40.

This case, at first sight, can hardly be distinguished from a common catarrh; for two days the symptoms indicate nothing more; towards the close of the second day, however, headache and great lassitude supervene, and increase greatly the next day, accompanied by aching pains in the back and limbs; the tongue soon becomes furred, the appetite fails, the liver performs its functions but imperfectly, as may be gathered from the light colour of the stools, denoting a diminution in the quantity of bile secreted from the blood; the intestinal canal does not appear to be deeply affected. The catarrh soon decreases, it seems transferred to the lining membrane of the nose, and thus passes off; but the appetite remains bad; a nauseous taste in the mouth, and an unpleasant smell in the nose continues, accompanied by an excessive degree of debility and great depression of spirits *altogether disproportionate to the mildness of the previous symptoms.*

CLASS II.

Lassitude, Pains in the Limbs, &c. followed by Cough.

Case 2.—Mary Angelly, æt. 24, servant, Howard-street, was admitted a home patient of the Birmingham Dispensary February 3, 1837.

On Jan. 28th, felt a pain in the back of her neck, which soon extended to her back and limbs. On the 30th a violent cough came on, and on the 31st she found she had lost her voice, and her throat became very sore; her bowels were *very* costive; she was restless at night, and had no appetite.

Feb. 3. Cough is very troublesome, expectoration scanty and difficult; severe headache, much aggravated by cough; aphonia; anorexia; constipation; pulse 90, sharp but feeble; great restlessness and no sleep; tongue covered with a white fur; skin dry and hot. [*Morphiæ Muriat.* gr. ¼, *omni nocte.—Vin. Ipecac.* ♏ xv. *Tinct. Hyoscyami*, ♏ xv. *Sodæ Subcarb.* gr. vj. *Aquæ*, ℥ j. *ter die.—Pil. Hydrag. cum Colocynth*, gr. v. *omni nocte.*]

4. Same state. *Perstet.*

5. Pulse 100, full; face flushed; cough dry and troublesome; great soreness of chest; respiration 28, with trace of sibilous râle; skin very hot and dry; thirst. [*Hydrarg. Submur.* gr. v.—*Pulv. Ipecac. comp.* gr. viij. *hâc nocte. —Haust. purg.* ℥ ij. *cras mane.—Mist. Salin. cum Oxym. Scillæ*, ℥ jss. *ter die.*]

7. Much better; cough is much less troublesome; respiration natural; voice is returning; pulse 70, feeble.—[*Perstet. in usu Mist. Salin. c. Oxym. Scillæ.*]

11. Still some cough, but she is much better in every other respect; suffers from flatulence and indigestion,

her food lying heavily on the stomach. [*Infus. Gentian,* ℥ j. *Tinct. Zingib.* ʒ j, *Sodæ Carb.* gr. xij. *bis die.—Syr. Papav.* ʒ ss. *Oxym. Scillæ,* ʒ ss. *urgente tusse.*]

20. Still very feeble and debilitated; in other respects well. [*Pil. Quininæ comp.* gr. v. *bis die.*]

27. Sanata.

Case 3.—Sarah Gilbert, æt. 19, servant, Great Charles-street, Birmingham.

Florid complexion; full sanguineous habit; being in very good health, first felt a pain in her arms and shoulders on January 29th, accompanied by great lassitude; towards night her throat became sore, then her chest, and a severe cough came on, with headache; bowels confined; pulse 90; rather full and hard; skin dry and hot; great thirst; respiration natural. [*Warm foot bath.—Pil. Colocynth comp.* gr. x. *horâ somni.—Pulv. Antim. comp.* gr. iv. *omni nocte.*]

Jan. 30. Bowels have been freely opened; cough is a little easier; pain extends to all her limbs with much aching; white fur on the tongue; bad taste in her mouth; much rawness and soreness of chest with a sense of constriction; anorexia; thirst; hot and dry skin. [*Emplast. Calefaciens, thoraci.*]

31. Feels better in every respect; some appetite.

Feb. 1. Cough is much worse, accompanied by severe headache; anorexia; thirst; great soreness and constriction of chest; respiration 28, natural; great restlessness and want of sleep; pulse 96, very sharp; skin dry and hot. [*Tinct. Hyoscyami,* ʒ j. *Aquæ,* ℥ j. *horâ somni.—Pulv. Antim. comp.* gr. iij. *hâc nocte.—Syr. Papav.* ʒ j. *Acid. Hydrocyan.* ♏ j. *urgente tusse.*]

2. Cough and pain of chest still severe. [*Perstet et habeat Emplast. Lyttæ, sterno.*]

3. A cold in the head has come on with much discharge from the nose, and the other symptoms are all relieved; debility and lassitude remained for some days.

Similar to these cases were twenty-five others, eleven males, aged 65, 44, 55, 55, 37, 35, 32, 30, 26, 21, and 1½; and fourteen females, aged 50, 49, 48, 47, 30, 29, 28, 25, 24, 21, 21, 20, 20, and 18.

In one female, aged 28, a miscarriage took place after a violent fit of coughing, but she suffered no inconvenience and speedily recovered. She had been under my care three months before with hyperæmia uteri, which had been relieved by leeches, and cold applications in the shape of injections and enemas of cold water.

In the case of a young woman, aged 20, cynanche tonsillaris soon became the leading symptom, accompanied by a full pulse, and a very hot and dry skin; twenty leeches were applied to the throat, and a brisk purge was administered with success.

In cases 2 and 3, and those that are classed with them, the general symptoms *preceded* the signs of irritation of the lining membrane of the lungs, and in this respect they differ from case 1. The period at which the cough and sore throat appeared, varied from the first to the third or fourth day, but when once it had set in, the difference between the two classes of cases vanished, and they then ran a similar course. The recovery, however, of the patients included in this last class was certainly more protracted than that of the former.

CLASS III.

Rigors, followed by Lassitude, Pains in the Limbs, Cough, &c.

Case 4.—John Hathersich, aged 60, stone sawyer, No. 34, Sheep-street, was admitted a home patient of the Birmingham Dispensary, January 28, 1837.

Was in good health, with the exception of a slight cough,

which he often has from exposure in his calling, when on the afternoon of January 25th, he was seized with a violent shivering fit, as if he was going to have the ague. He experienced alternate heats and chills during the night, and in the morning his head felt very light and giddy and ached severely; the pain soon extended down his back and limbs, and his cough became greatly increased.

January 28. Complains of great headache and pain in his eyes; great debility and lassitude, and aching pains in all his limbs; cough is very troublesome; expectoration difficult; dyspnœa considerable; tongue covered with a yellowish brown fur; has a bad taste in his mouth; bowels are and have been regular from the first; pulse 84, rather full; much pain and constriction about the chest; appetite gone; thirst; skin rather dry; percussion clear; respiration 36, accompanied by sibilous and sonorous râles; action of heart hèavy and distant. [*Emplast. Lyttæ, sterno.—Tinct. Hyoscyami*, ♏ xv. *Tinct. Lobeliæ*, ♏ xv. *Vin. Ipecac.* ♏ x. *Aquæ*, ℥ j. *alterâ quâque horâ.*]

30. Much relieved. *Perstet.*

February 1. Cough much better and loose; expectoration muco-purulent; sibilous and sonorous râles gone; respiration 28, easy; head feels light but not painful; appetite is still bad, and he feels so low as to dread fainting; pulse 65, feeble and small. [*Ammon. Carb.* gr. v. *Infus. Gentian*, ℥ j. *ter die.*]

March 6. This patient complains of dyspnœa on the least exertion; action of heart is very heavy and distant, and there is more dullness than usual around the region of the heart, but the pulse is tolerably steady. The respiration is clear and vesicular, but feeble in points. It is probable that the heart is enlarged, and the lungs slightly emphysematous, and were so at the time of his attack; I shall therefore proceed to detail a case in which there is no reason to suspect the slightest disease previous to her attack.

CASE 5.—Fanny Sharpe, æt. 17, press-worker, 9 court, Upper Tower-street, was admitted a home patient of the Birmingham Dispensary, January 30, 1837.

Ten days ago, being in good health, was seized with rigors; heats and chills then alternated; bowels were excessively confined; a violent pain in the head soon came on, which spread to the neck, back and limbs; in about five days a cough came on.

Jan. 30. Feels much worse; has fainted twice; headache is intolerable; a great deal of cough with soreness of chest; tongue coated; has a bad taste in the mouth; anorexia; thirst; nausea; bowels still confined; pulse 110, sharp; skin dry. [*Emplast. Lyttæ, sterno.—Pil. Hydrarg. c. Colocynth.* gr. x. *omni nocte.—Syr. Papav.* ʒ ss. *Oxym. Scillæ*, ʒ ss. *urgente tusse.—Pulv. Efferves. p. r. n.*]

Feb. 1. No sleep; cough and headache violent; respiration 26, natural; expectoration difficult. [*Perstet et habeat Morphiæ Muriat.* gr. ¼, *omni nocte.*]

5. Headache better; feels very thirsty; no appetite. [*Mist. Salin. c. Oxym. Scillæ.*]

Soon convalescent.

Similar to these cases were twenty-eight others: viz. 16 males, aged 2, 6, 6, 13, 19, 19, 28, 35, 36, 37, 40, 45, 50, 50, 51, 66; and twelve females, aged 3, 16, 16, 16, 18, 22, 29, 34, 39, 42, 43, 60. But there is one which stands alone, and which I shall now detail.

CASE. 6.—Margaret Parsons, æt. 40, housewife, 9 court, St. George-street, was admitted a home patient of the Birmingham Dispensary, February 3rd, 1837.

Being previously in good health, was seized, on the 27th of January, with *cold perspirations* and great faintness, succeeded by aching pains in the limbs and some little headache; a slight soreness of the chest came on the next day, with a cough and the expectoration of clear mucus.

Feb. 3. Complains of great soreness of the chest when

she coughs; expectoration is scanty and difficult; cannot sleep, being restless and teased with her cough; *perspires greatly;* has no appetite; some thirst; has a nauseous taste in her mouth; bowels are much confined; urine high coloured; slight headache; feels very heavy and dull, and experiences great weariness and pains in the limbs; pulse 74, soft and feeble; respiration, &c. natural. [*Morphiæ Muriat.* gr. $\frac{1}{4}$, *omni nocte.—Hydrarg. Submur.* gr. ij. *Pulv. Jalapæ,* gr. xij. *hâc nocte.—Mist. Salin.* ℥ jss. *Vin. Ipecac.* ♏ xv. *4tis horis.*]

5. Cough is much better; expectoration is easy and little or no pain in the chest; no pain in the head; great weariness and aching in the back and limbs; bowels have been freely opened; urine lighter coloured; tongue slightly furred; pulse 68, feeble and small. [*Perstet in usu Misturæ.*]

7. Has almost lost her cough, but is extremely feeble and low; nauseous taste still remains; no appetite. [*Infus. Gentian,* ℥ j. *Sodæ Carb.* gr. xij. *bis die.—Pil. Hydrarg.* gr. jv. *omni nocte.*]

10. Much better, but still very weak. [*Perstet et habeat Pil. Quininæ comp.* gr. v. *bis die.*]

Soon well.

When we come to the cases complicated with other diseases, we shall see that this class, comprising cases 4, 5 and 6, in which rigors were the first symptoms, includes by far the greatest number of cases; and in it are found all those in which danger was present. Differing from the two former classes in the onset, in two or three days it approaches them in such a manner as not to be distinguished from them. In two of these persons delirium occured in the night, and in one of them, two nights successively.

In two individuals, the attack commenced with vomiting accompanied by violent headache, a large tongue covered with a thick, soft, yellowish brown fur. In one of these, diarrhœa came on, and in the other there was most obstinate constipation of the bowels; cough, however, soon

set in in both these cases, and they then assumed the common type; they were females, aged 20 and 29. In both cases great relief was afforded by the administration of an emetic of 2 grains of Tartarized Antimony.

Such are the forms under which I have observed this disease when it has attacked persons being previously in good health, and from such alone can a true picture of it be drawn. Before, however, I proceed to analyze the symptoms and the treatment, I shall detail those cases in which the attack was modified or altered in its character by previously existing disease; and those in which it was succeeded by other complaints. We shall then have before us a complete view of the disease, and shall be prevented from confounding with it those peculiarities of form which evidently depend upon other circumstances than the disease itself.

SECTION II.

THE INFLUENZA MODIFIED BY PRE-EXISTING DISEASE.

The most numerous class is that in which, previous to this attack the patients were afflicted with asthma. This comprises fifteen persons. I use the word asthma to denote a difficulty of breathing more or less constant. Thus it denotes only a symptom, and may arise from different causes, whether residing in the heart, or lungs, or both. In some of the cases we shall be enabled to trace the principal cause, while in others, it will escape our observation. Whatever, however, may be the cause, we shall find its presence to produce a considerable modification in the Influenza; and, with one exception, all the cases in which I have appre-

hended danger, have been found in this class; hence, the study of the symptoms as thus modified and the treatment employed, are most important.

Asthma.—Case 7.—Phœbe Williams, æt. 63, housewife, 9 court, Lower Tower-street, was admitted a home patient of the Birmingham Dispensary, January 31, 1837.

Has been ashmatic for thirty years; had a cough, accompanied by yellowish expectoration, when on January 22 she was seized with a shivering, followed by pain in the head, limbs, and more especially the back.

Jan. 31. Bowels are confined; has much pain in the back, head, and limbs; urine is high coloured and thick; tongue white; skin dry; dyspnœa urgent; cough; nauseous taste in the mouth; percussion elicits a clear sound all over the chest; respiration is 44, laboured; mucous râle exists over the whole of the anterior portion of the right lung, and over a large space of its posterior surface; on the left side there is much sonorous and sibilous râle; pulse 110, sharp, not full; no sleep. [*Hydrarg. Submur.* gr. ij. *Pulv. Jalapæ*, gr. viij. *hâc nocte.—Mist. Salin.* ℥ jss. *Tinct. Lobeliæ Æther.* ♏ x. *Vin. Ipecac.* ♏ x. *4tis horis.—Morphiæ Muriat.* gr. ¼, *omni nocte.*]

Feb. 2.—Very ill; pulse 126, feeble; respiration extremely laboured and dyspnœa intolerable; râle as before; but the mucous râle has become almost tracheal; bowels relieved. [*Emplast. Lyttæ. sterno.—Tinct. Lobeliæ Æther.* ʒ ss. *Aquæ*, ℥ ij. *alterâ quâque horâ.*]

My notes are wanting up to

Feb. 11, when she was much relieved; respiration 30, easy; mucous râle much less, and more circumscribed; bowels confined. [*Perstet et habeat Ol. Ricini, p. r. n.*]

13. Complains of great difficulty in expectorating. [*Adde Misturæ Lobeliæ, Sodæ Subcarb.* gr. v. *sing. dosibus ter die sumend.—Emplast. Opii, sterno.*]

In a few days this patient was comparatively well. She has now sibilous and sonorous râles; and expectoration of

pearly mucus, more or less tinged by the black colouring matter of the lungs. The râles are chiefly heard over the left front of the chest, which sounds *remarkably* clear on percussion, and where vesicular respiration is not heard; the action of the heart is, as it always was, natural. We cannot fail to recognise in this case emphysema of the lungs, a complaint which, whether I look to post mortem examinations, or to the symptoms of it during life time, I find very common, even in persons under thirty years of age.

On the 2nd of February this patient was in a very dangerous state, and I almost despaired of her life. Although the notes are wanting up to the 11th, yet I am able to state that she constantly persevered in the use of her medicine every other hour.

Case 8.—William Wheeler, æt. 41, tailor, 3, Heneage-street, was admitted a home patient of the Birmingham Dispensary, January 20, 1837.

Has been many years addicted to excessive drinking, and has frequently exposed himself to wet and cold; has been very asthmatic for seven or eight years, and his breathing has also been accompanied more or less by wheezing; has been subject to palpitation of the heart. On January 16th he perceived his cough renewed, and in an hour or two it became very violent, followed by headache; his appetite failed him; he could not sleep; bowels were regular.

Jan. 20. Complains of headache and occasional rigors; violent cough, with excessive dyspnœa; anorexia; restlessness; nausea; bad taste in the mouth; urine is high coloured; bowels regular; expectoration glutinous and difficult; pulse 110, sharp, but feeble, and irregular as to power, but never actually intermitting. Percussion elicits a clear sound all over the chest; respiration 40, with much sibilous, sonorous, and sub-crepitant râle; the latter in spots degenerating into mucous râle; voice unaltered; the action of the heart is clear and sharp, and is heard over every part of the

chest; its impulse is not felt. [*Tinct. Lobeliæ*, ♏ xx. *Vin. Ipecac.* ♏ x. *Sodæ Subcarb.* gr. v. *Aquæ*, ℥ jss. *tertiis horis.*]

23. Respiration easier, 30; no mucous râle, and much less sub-crepitant râle; he complains chiefly of headache, want of sleep, and great soreness and rawness of chest; his wife says he is often light-headed in the night. [*Perstet et habeat Emplast. Lyttæ, sterno.—Extract. Hyoscyami*, gr. x. *omni nocte.*]

31. Much better in every respect; the blistered surface is very sore and irritates him greatly; bowels are rather confined. [*Perstet et habeat Pil. Hydrag. cum Colocynth*, gr. v. *omni nocte.—Cataplasm. thoraci.*]

This patient slowly recovered, continuing the use of the Lobelia with tonics. The action of the heart remains the same; there is sibilous and sonorous râle; and the pulse is very small, and almost intermits. I presume that there is a dilatation of the heart of this individual, with attenuation of the parietes.

There were two other cases in which the complaint ran almost the same course, and in both of them there is reason to suspect disease of the heart. In one of these cases, a female aged 47, named Jane James, a washer-woman, in Camden-street, often afflicted with articular rheumatism, the mitral valve may be supposed to be the seat of disease, as evinced by a *constant bruit de scie* (saw sound) the maximum of which sound is under and a little to the left of the left mamma; where is also felt a purring thrill; the pulse is small, sharp, and feeble. In this case, as in Wheeler's, the subcrepitant râle was heard, being the only two cases in which it was heard. In the other case a Mr. L. aged 55, ossification of the aortic valves and hypertrophy of the heart may be supposed to exist, as evinced by a *constant bruit de râpe* (rasp sound) heard very distinctly all up the sternum, with some dullness over the region of the heart, and a strong heaving up of the head of the auscultator at every stroke of the heart,

accompanied by a tremulous vibratory intermitting pulse, very feeble when compared with the force of the heart's action.

Case. 9.—Mary Harvey, æt. 48, spinster, semstress; 3 court, Howard-street, was admitted a home patient of the Birmingham Dispensary, February 4, 1837.

Feb. 5. A very thin and weakly person; her father and mother respectively reached the age of 70. Has been for many years troubled with cough and dyspnœa every winter; she usually expectorated white pearly mucus, and when her cough was worse the expectoration was of a yellowish or greenish colour; has never had night perspirations or evening fever. Fourteen days ago, she felt very chilly, and soon after this pains came on in her head, back and limbs; ever since then her cough and dyspnœa have much increased; expectoration is muco-purulent, yellowish, homogenous; she has occasionally observed streaks of blood in it; bowels are regular; tongue natural; pulse 128, small and sharp; percussion elicits a clear sound all over the chest, and more especially over the middle of the anterior part of the left side; respiration 36, very weak, with a trace of sibilous and sonorous râle all over; over the middle of the front of the left side, the respiration can hardly be heard at all; voice unaltered; action of the heart natural. [*Tinct. Lobeliæ Æther.* ♏ xx. *Vin. Ipecac.* ♏ x. *Sodæ Subcarb.* gr. vj. *Aquæ*, ℥ jss. 4*tis horis.—Emplast. Lyttæ, sterno.*]

6. Respiration is easier; and dyspnœa much less; a trace of mucous râle is heard near the root of the lungs; pulse 120, rather stronger. [*Perstet in usu Misturæ.*]

8. Appears very low and feeble; dyspnœa very considerable; mucous râle is heard over a large space in both lungs: pulse 136, very feeble and uneven. [*Spirit. Ammon. Arom.* ʒ ss. *Aquæ*, ℥ j. *in languoribus.*]

9. Tracheal râle; towards evening she died.

Had permission been obtained to inspect the body of this

patient, emphysema of the left lung would probably have been discovered. Was not the shock produced by the attack upon the nervous system of a weak and sickly person, the immediate cause of death? The mucous râle was not heard at all until within forty-eight hours of death, and may rather be attributed to weakness than to bronchitis alone.

Similar to these cases were ten others, seven males, aged 83, 55, 50, 47, 38, 35 and 35; and three females, aged 64, 60 and 38.

In one female, aged 38, the dyspnœa was excessive, and the countenance was perfectly livid: the extremities being plunged in hot water and powerful doses of the Ætherial Tincture of Lobelia being administered, she quickly recovered. In one male, aged 35, there was delirium for two nights running, which was met by the administration of the Muriate of Morphia in half grain doses, at bed-time.

The next class comprises the cases of those persons who were labouring under some affection of the alimentary canal, at the time of this attack.

Affection of the Alimentary Canal.—Case 10.—Jane Davis, æt. 56, housewife, Allen's Buildings, Heneage-street, was admitted a home patient of the Birmingham Dispensary, February 4th, 1837.

Has borne a very large family; has been subject to occasional difficulty of breathing for some years; is constantly troubled with indigestion and sour eructations; is hardly ever free from them. On January 29th, she was taken with a great shivering, and soon after cough came on; she soon lost her appetite; she had flying pains about her but no headache; her tongue soon began to be sore; bowels were regular; stools dark coloured.

5. Tongue and mouth are very sore; tongue is covered with a thick, dry, dark brown coat in the middle, and is of a bright scarlet at the edges; excessive nausea, but she does not vomit; tightness and pain across the chest; great tenderness

in epigastric region ; respiration, &c. natural and free, 24 ; pulse 110, small and sharp ; but little cough. [*Emplast. Calefaciens, regioni epigast.—Ol. Ricini, p. r. n.—Tinct. Hyoscyami,* ♏ x. *Spirit. Æther. Nit.* ♏ xx. *Vin. Ipecac.* ♏ x. *Aquæ,* ℥ j. *tertiis horis.*]

9. Rather better. [*Tamarind Water. Perstet.*]

14. Mouth and tongue still sore, but in other respects better; pulse 70 ; cough rather troublesome; much nausea. [*Mel. Boracis.—Pulv. Effervesc.*]

18. Much better, but very weak and low ; tongue clear, but very red and dry ; little or no cough. [*Pil. Quininæ comp.* gr. v. *bis die.*]

28. No cough; pulse low; she has not yet recovered her appetite. [*Perstet in usu Pil. Quininæ comp. et habeat Infus. Gentian,* ℥ j. *bis die.*]

Case 11.—Mary Butler, aged 44, housewife, 2 court, Cottage-lane, was admitted a patient of the Birmingham Dispensary, November 8, 1837.

Has had ten children and enjoyed good health until two years since ; she was then attacked with frequent vomiting, pain in her stomach after food, and frequent rising of sour water; three months since was attacked in a similar manner, and with pain in the right hypochondriac region which still continues ; bowels are at present excessively costive ; stools dark coloured ; has vomited brown fluid, and clear fluid with dark streaks in it occasionally ; countenance pinched and anxious; pulse very small and feeble; tongue is coated with a soft, yellowish brown coat; has occasionally pain in the head and between the shoulders; menstruation regular ; urine plentiful and clear ; has frequent rigors and palpitations of the heart; there is no tumor any where perceptible : the action of the heart is feeble but natural ; percussion and auscultation elicit nothing unnatural in the chest ; there are, however, palpitations in the epigastric region. It would be tedious to go through the

whole of this case. She was often troubled with irritation of the great intestines, evinced by frequent desire to go to stool, accompanied by evacuations of slimy mucus more or less tinged with blood. On these occasions the irritability was soon allayed by an Enema Amyli containing some drops of Tinct. Opii. A small number of leeches were frequently applied to the epigastric region: alterative doses of Pil. Hydrag. were administered with gentle laxatives, followed by mild tonic and alkaline medicines, and by February she had nearly recovered her health and had become comparatively plump, when on February 6th she was attacked with a pain in the back, and aching of the limbs, followed by violent headache, vertigo, and diarrhœa. The next day a cough came on; her appetite failed; her tongue was coated with a thick yellowish brown coat, and she felt great nausea; could not sleep; pulse 110, sharp and small; respiration natural; action of heart natural. [*Hydrarg. c. Creta*, gr. iij. *Pulv. Ipecac. comp.* gr. v. *omni nocte.—Mist. Salin. c. Oxym. Scillæ, ter die.—Diluent drinks.*]

Feb. 8. Rather better, but headache is very violent and cough troublesome. [*Syr. Papav.* ʒ j. *Acid. Hydrocyan.* ♏ j. *ter die et perstet.*]

10. Headache and cough much better; a cold in the head has come on; diarrhœa continues. [*Omit. Mist. Salin. Perstet in usu Pulvis omni nocte, et habeat Pulv. Kino. comp.* gr. xij. *bis die.*]

14. Feels much better; appetite has returned; diarrhœa ceased; no cough; nose is stuffed up, and she feels very low and weak. [*Conf. Arom.* gr. xij. *Spir. Ammon. Arom.* ʒ ss. *Aquæ,* ℥ j. *in languoribus.—Quininæ Sulph.* gr. j. *bis die.*]

Soon convalescent, but very feeble.

Although the common disease is clearly recognizable in both these cases, yet it is much modified by a constitutional tendency to derangement of the alimentary canal. In the case of Jane Davis, the stomach may be presumed to be the

chief seat of the irritation which was present; and in the case of Mary Butler, the intestines seem to have been most affected. There can be little doubt that she had been the subject of chronic gastritis, previous to this attack.

Under this class may be ranged the cases of six other persons, in whom the attack was much modified by the affection of the alimentary canal, under which they had been previously labouring.

These are all females, aged 50, 44, 39, 36, 36, and 29.

In none of these was diarrhœa constant; in some bilious vomitings; in two very foul eructations, and in some very dark, offensive, slimy stools were observed.

We now come to those cases in which the patients were labouring under pulmonary consumption at the time they were attacked with the Influenza.

Phthisis.—Case 12.—Robert Prescott, aged 20, 2 court, Sand-street, was admitted a home patient of the Birmingham Dispensary, January 9th, 1837.

Has had a cough accompanied by more or less expectoration for the last 12 months. Lately has had evening fever, and night perspirations; appetite is variable; bowels are confined; has lost flesh lately; has flying pains about the chest; is very restless at nights and hardly sleeps at all; pulse 120, sharp and small; expectoration mucu-purulent, with occasional streaks of blood in it; percussion elicits a dull sound under the right clavicle; there is a circumscribed gurgling in the same spot, with a flapping like the the shutting of a valve, and doubtful pectoriloquy; the cough is accompanied by a splash; the action of the heart is heard more distinctly under the right than under the left clavicle. [*Extract. Hyoscyami*, gr. v. *omni nocte.—Tinct. Ferri Mur.* ♏ xv. *Tinct. Hyoscyami*, ♏ xv. *Aquæ*, ℥ j. *ter die.—Ol. Ricini, p. r. n.*]

His appetite improved, and he slept better, but his cough remained the same, when on February 10th a weariness

and aching in his limbs came on, followed by headache; the cough soon became very violent, accompanied by tickling in the throat and pain in the chest; bowels regular; tongue covered with a white fur; no appetite; pulse 130, fuller than before; auscultatory signs the same as before. [*Mist. Salin. cum Oxym. Scillæ.—Extract. Hyoscyami*, gr. x, *omni nocte.*]

12. The cough is much better, and the soreness of the chest and headache has disappeared; he gradually recovered from the effects of this attack.

March 6th. Feels better than he has done for months; fancies he gets flesh; there is no evening fever, or night-perspirations; appetite is good; pectoriloquy is complete under the right clavicle; mucous râle with cracking is heard in the same spot, where the dullness is much less marked than it was in January.

In this case the progress of the consumption does not appear to have been rendered more rapid by the Influenza. According to the patients own account of himself, he seems much better than he was before it. Upon reference, however, to the signs furnished by percussion and auscultation, there does not appear to be much alteration in the condition of the lungs. There is no trace of any softening of tubercles in other parts of the lungs, than the place where a cavern was originally detected. That excavation may be enlarged, but we have no evidence of such being the case. The diminution of the dullness on percussion evidently depends upon the difference between the quantity of fluid in the cavern when the patient was last examined, and when auscultation was practised in January. In the first examination the great dullness resulted from the cavern being nearly full of fluid, as evinced by the doubtful pectoriloquy; in March it was nearly empty, and pectoriloquy was complete.

Case 13.—Benjamin Smith, æt. 27, iron founder, Camden School Court, was admitted a patient of the Birmingham Dispensary, January 30, 1837.

Has had a pain under the sternum for six weeks, accompanied by a troublesome cough; expectoration is white and glutinous; latterly has had a pain in his head; bowels are regular; has lost flesh greatly; has no night perspirations; pulse 90, small and sharp; percussion natural; respiratory murmur is very feeble about two inches below the right clavicle; there is a slight tremulous bronchophony in the same spot. [*Emplast. Lyttæ, sterno.—Mist. Salin.* ℥ jss. *Vin. Ipecac.* ♏ xv. *Tinct. Camph. comp.* ♏ xv. *4tis horis.*

Feb. 1. Feels much better. [*Perstet.*]

9. A trace of sibilous and sonorous râle; the cough is much better, but he feels very low. [*Tinct. Ferri. Mur.* ♏ xx. *Tinct. Hyoscyami,* ♏ xv. *Aquæ,* ℥ j. *ter die.*]

On the next day his throat became sore and his cough was much increased; great weariness and lassitude came on him, but no actual pain in the limbs.

11. Severe headache; bowels costive; tongue covered with a brown fur; bad taste in the mouth; cough very troublesome. [*Hydrarg. Submur.* gr. ij. *Pulv. Jalapæ,* gr. vj. *horâ somni.—Extract. Hyoscyami,* gr. x. *omni nocte.—Syr. Papav.* ʒ ss. *Oxym. Scillæ,* ʒ ss. *urgente tusse.*]

16. Cough is convulsive; headache less. [*Syr. Papav.* ʒ j. *Acid. Hydrocyan.* ♏ j. *urgente tusse.*]

27. Is extremely weak, but feels in other respects much the same as before the attack. Prolonged expiration, coarse and bronchial is heard under the right clavicle; there is some dullness there, and the heart is heard beating there much more distinctly than under the left clavicle.

There is no proof in this case of tubercular deposit in the lungs; but when the symptoms and stethescopic signs are considered, there is a strong probability in favour of its existing in the summit of the right lung. Prolonged expiration is

the first sign of solidification of any portion of the lungs; in addition to which some dullness is discovered. It is probable, therefore, that the bronchial irritation of the influenza has extended to the pulmonary tissue around a deposit of tubercles, and that hepatisation is taking place, although as yet there are no symptoms of the softening of the tubercles.

The others were confirmed cases; one male aged 24, and two females aged 16 and 14. The march of the disease in the former has not been sensibly affected; in the eldest of the latter, dyspnœa was so great that I at one time feared immediate death, but she rallied; she is, however, much weakened, and each lung is the seat of a large excavation. In the female aged 14, a curious circumstance has occured, for which I know not how to account. She had been under my care for many months; with great dullness; *bruit de pot félé* (cracked pot), and pectoriloquy under the left clavicle; latterly she had much improved, she expectorated but little, and actually gained flesh; the *bruit de pot félé* completely disappeared, and the pectoriloquy became doubtful: mucous râle less; dullness the same. Since her attack of influenza the *bruit de pot félé*, mucous râle, and perfect pectoriloquy have re-appeared, but she feels tolerably well and goes about her work.

Hysteria.—Case 14.—Mrs. R. æt. 24, came under my care February 23, 1837.

At the age of 17, in consequence of exposure to cold, the menstrual discharge disappeared for some time; she then had epileptic fits; she was married at 19, since which time she has had no fits; has had one child and one miscarriage; is very weakly and delicate. She applied to me May 6, 1836; she was then very weak, and complained of indigestion and headache; but more particularly of pricking and numbness in the arms and fingers; these sen-

sations she used to experience previous to her fits; often sobbed and cried for hours together; bowels were rather confined, and stools light coloured. Under the use of alterative doses of Pil. Hydrag., with laxatives and mild tonics, and an occasional sedative pill, she got nearly well in four weeks time. A journey to the sea then completed the cure, and she came back in good health and spirits; since then, however, she has been occasionally very hysterical.

On January 31st, I was sent for to attend her; she had been ill about five days, and had been attended by a surgeon of this place; she now suckles an infant two months old; she said that about a week ago she had been taken with great lassitude and pains in the head, back, and limbs, followed by chilliness and cough; she had been very restless, and had much pain in the lower part of the left front side of the chest, for which she had been leeched; she now complains of soreness upon coughing, and great pain in the same place; feels something like a ball rising up into her throat; headache is occasionally violent; gets no sleep; has no appetite; has great apprehension that she is labouring under inflammation of the chest; bowels regular; perspires copiously; cries and sobs for a long time together; pulse 76, natural; percussion clear; respiration vesicular, and soft all over the chest; can draw a deep inspiration without any pain. [*Mist. Salin. c. Oxym. Scillæ, 4tis horis. Extract. Hyoscyami,* gr. v. *omni nocte.*]

Feb. 1. Complains of fever and thirst, and pains as before. [*Mist. efferves. et perstet.*]

3. Complains of want of sleep, and says she has had none since the attack; complains greatly of rising in the throat, and lowness of spirits. [*Adde Mist. efferves. Spir. Ammon. arom.* ʒ ss. *sing. dosibus.—Morphiæ Muriat.* gr. ss. *hâc nocte.*]

4. Feeling very uneasy I was requested to meet another physician in consultation; it was agreed to pursue the same mild treatment, with the addition of four grains of Pil. Hy-

drag. every night, and a little Ol. Ricini in the morning; she soon recovered, but remains very hysterical.

Similar to this case were two others, married females, aged 49 and 47; the latter was chiefly characterised by lowness and convulsive sobbing; but the former case was identically the same as Mrs. R.'s; she is subject to fits, and had the same dread of serious disease; and being a leech woman, she had leeched herself previous to my arrival; but, as in the former case there was not the slightest symptom of any serious affection; it is true they both shrunk very much upon pressure being made upon the side affected; but such a symptom is of no value in such a case.

Hemicrania.—CASE 15.—Joseph Chamberlain, æt. 36, brass-founder, 8 court, Upper Tower-street, was admitted a home patient of the Birmingham Dispensary, February 5, 1837.

Has been subject to attacks of hemicrania for many years, which have increased both in frequency and intensity during the last six months. On February 3rd he was seized with rigors, followed by giddiness, dimness of vision, and great trembling; his feet were as cold as ice; headache soon became violent; at night a tickling in the throat came on, with cold clammy perspirations.

5. Bowels costive; tongue dry, and covered with a dark brown fur; bitter taste in the mouth; pain in the chest, and great pain in the head; both much increased by coughing; expectoration clear and scanty; restless nights; pulse 96, small, sharp, and feeble; respiration, &c. perfectly natural. [*Pil. Hydrarg.* gr. x. *Extract. Hyoscyami*, gr. x. *omni nocte.*—*Ol. Ricini, p. r. n.*—*Emplast. Lyttæ. sterno.*]

7. Cough better, but pains in the head dreadful; pulse 110, same characters; no sleep at night; no appetite; delirium at nights. [*Perstet in usu Misturæ.*—*Emplast. Lyttæ, nuchæ.*—*Morphiæ Muriat.* gr. ss. *omni nocte.*]

9. Attacks less frequent and less severe. [*Ung. Sabinæ, nuchæ.*—*Perstet.*]

12. Much better, but very low and feeble. [*Quininæ Sulph.* gr. j. *bis die.*]

Soon better than he had been for some years.

Syphilis.—Case 16.—A. B. æt. 30, came under my care Nov. 17, 1837.

She was labouring under secondary syphilis. Two years before, the original disease had been communicated to her under peculiar circumstances, which prevented a suspicion of its nature for more than two months; since then she has been salivated several times, and has taken mercury in every form under different medical men. She was in the following state when she came under my care; there were painful nodes on the legs and arms; rupia in two or three places; one was on the forehead, the scab of which was very prominent; she experienced severe and shooting pains in the forehead, and great pain in the limbs at night; the uvula and a part of the soft palate were gone, and the voice was much affected in consequence; the throat and palate were in a horrible state of ulceration; she had lost her flesh and appetite for many months. She was ordered a full generous diet; Hydriodate of Potash was administered thrice a day in decoction of Sarsaparilla; a lotion consisting of a strong solution of the same was ordered for the eruption. This treatment with some slight variations was continued ten weeks, at the end of which time she had nearly recovered, when she was taken with the influenza, in the ordinary manner; pains in the neck, back, and limbs, were succeeded by a cough, and her throat was much inflamed and soon ulcerated to a great extent; a few leeches were applied, and the inflammation was reduced. In this state of things a consultation was held with an eminent surgeon; it was agreed to put her again upon the same course as before, dissolving each dose of the Hydriodate of Potash in eight ounces of warm water; and a solution of Oxymuriate of Mercury was ordered to be applied to the throat. Six weeks have now elapsed;

the throat is nearly healed; she has become plump and cheerful, and has an excellent appetite, but continues taking her medicines.

The depression of spirits of this patient when recovering from the influenza was most distressing; nothing could convince her that she should ever recover, and that she should not be devoured by the original disease with which she had been afflicted.

The disease in the two following cases was followed by other complaints, in case 17, by pneumonia, and in case 18, by articular rheumatism.

Case 17.—Elizabeth Gadd, æt. 20, burnisher, 7 court, Snow-hill, was admitted a patient of the Birmingham Dispensary, February 3, 1837.

Has had for some time a slight pain in the left side, with occasional headache and some little cough; but respiration, &c. was natural. On February the 2nd, she was seized with a chilliness, not amounting to shivering, which was soon followed by pain in the neck, back, head and limbs, with nausea and increase of cough.

Feb. 3 Has no appetite; has considerable cough, with clear mucous expectoration and much pain in the chest; weariness and aching of limbs; tongue is covered with a white fur; skin is hot and dry; pulse 100, small; is very thirsty; bowels are confined; restlessness; percussion clear; respiration and sound of voice natural. [*Emplast. Lyttæ, sterno.—Mist. Salin. c. Vin. Ipecac. 4tis horis.—Hydrarg. Submur.* gr. jv. *Pulv. Jalapæ*, gr. xij. *statim.—Pulv. Ipecac. comp.* gr. viij. *omni nocte.*]

5. All her symptoms are improved; the skin is moist; thirst is moderate; cough much less troublesome; bowels relieved; has slept tolerably well; no pain in the chest. [*Perstet.*]

7. Is up and seems much better.

11. I saw her in consequence of being informed she was

much worse; she is labouring under great dyspnœa; tongue coated; great thirst; weight and dull pain below the heart; expectoration is of the colour of sepia, not in streaks, but the colour is intimately blended; there is some clear mucus however with it; percussion elicits a dull sound over the whole lower third of the left lung both before and behind, which is not altered by position; respiration is 44, and null over the same space as the dullness, but there is no trace of any râle; it is rather puerile elsewhere; over the same spot there is bronchophony; pulse 110, small but sharp. [*Antim. Tart.* gr. j. *Syr. Papav.* ʒ j. *Aquæ distil.* ʒ xv. *alterâ quâque horâ.*]

12. Has been much purged, and vomited after the three first doses of her medicine; since then she has tolerated it; the auscultatory signs are the same.

13. Same signs. [*Antim. Tart.* gr. jss. *alterâ quâque horâ.*]

14. Dyspnœa less; respiration 34; expectoration more ferruginous in its colour; auscultatory signs the same. [*Antim. Tart.* gr. ij. *alterâ quâque horâ.*]

15. Colour of the sputa is become much lighter; a slight crepitant râle is now heard at the bottom of the left side behind. [*Perstet.*]

17. Crepitant râle distinct; appetite returning. [*Perstet.*]

19. Râle almost disappeared; much dullness still remains.

23. Râle is quite gone; respiration 28, feeble in the affected part; pulse 75; appetite good; tongue clean; slight dullness.

With the exception of a little dyspepsia this patient soon recovered.

It is remarkable that this should have been the fifth attack of pneumonia in the same family within twelve months. The mother and one little brother had it once each, and another little brother has had it twice. The two children

were under my care. In the first attack of the elder some pleuritis was complicated with it, for which leeches were applied, but (with this exception) those cases were treated in the same manner as that detailed here.

There was another case in which pneumonia came on, but I refrain from giving it here for many reasons. I did not see the patient myself until the symptoms of pneumonia manifested themselves, and hence I am unable to pronounce from *my own observation* whether they were preceded by influenza or not. The auscultatory signs too, were of such a peculiar nature that I much prefer reserving this case for a work, the materials for which are nearly collected. In addition to this, the patient has had a relapse from which he has not yet recovered.

With regard to the brown sepia colour of the sputa, I should mention that in two other cases of pneumonia it has presented a similar colour, and in both of them it gradually became more and more ferruginous in its appearance.

Frances Johnson, æt. 58, widow; Upper Brearly-street, Birmingham, came under my care January 24, 1837.

Has usually enjoyed very good health, but has had occasionally slight rheumatic pains; about the 7th of January she says she was taken with a chilliness, and constant sneezing; a cough set in with soreness of the chest, and pain in the limbs; she took but little medicine and in ten days was much better, when she was taken very ill with pains in the limbs and particularly in the wrists; loss of sleep and appetite, with a most intolerable taste in her mouth; took medicine and was a little better. Present state—tongue natural; pulse 65, feeble and small; bowels regular; complete loss of appetite; frequent nausea; unpleasant taste in the mouth, and loathes solid food; great pain and tumefaction in the wrists, of which she has almost lost the use. Ung. Veratriæ was ordered to the wrists, and Quinine and Tincture of Guaiacum were administered; she recovered the

use of her wrists very speedily, her appetite improved but very slowly, and her health was restored in about three weeks.

Another patient, however, who had been subject to violent attacks of articular rheumatism, and who had been compelled to leave the army in consequence, having had the influenza very severely, did not experience the slightest symptoms of any rheumatic affection either after or during the attack.

SECTION III.

AN ANALYSIS OF THE PRE-DISPOSING CAUSES, SYMPTOMS, AND TREATMENT OF THE INFLUENZA IN ALL THE CASES.

CHAP. I.

Causes of the Disease.

A review of the cases before us, leads us to enquire into the causes which may have tended to produce or propagate this disease,—whether its developement was in any degree influenced by age, diet, habits, or locality, and whether when once introduced it can be communicated from one individual to another.

Age.—The following is a table of the ages and sexes of the individuals attacked, and nearly the same result is

afforded by eighty other cases, in which I have noted the ages.

	Males.	Females	Total.
Between the ages of 1 & 5	2 ..	1 ..	3
5 & 10	2 ..	0 ..	2
10 & 20	5 ..	7 ..	12
20 & 30	8 ..	15 ..	23
30 & 40	13 ..	8 ..	21
40 & 50	6 ..	13 ..	19
50 & 60	9 ..	3 ..	12
60 & 70	3 ..	4 ..	7
70 & 80	0 ..	0 ..	0
80 & 90	1 ..	0 ..	1
Total	49	51	100

Thus, although no age was exempt, the largest proportion is found between the ages of twenty and fifty, that is in the prime of life. I am inclined to think that this result will be found to be general, as it coincides with the observations of Messrs. Louis and Andral in their respective works on fever, who found the greatest number of persons attacked between the ages of twenty and fifty, more particularly between twenty and thirty; many of them being in the full vigour of life, of sanguineous temperament, and ample muscular developement.

Of the sixty-five persons in good health previous to the attack, forty-four were not more than forty years of age. Of the fifteen previously asthmatic, eleven were above forty, and the other four were between thirty-five and forty. Of the five previously phthisical all were under twenty-seven.

Diet.—In no case was the attack preceded by a state of destitution or privation, and with very few exceptions the patients seemed in easy circumstances for their situation in life, and were abundantly supplied with wholesome and nutritious diet.* Beer drinking, to a considerable extent, exists

* Many of the pauper class are attended by the medical officers appointed by the parochial authorities.

among the mechanics of this town, but the consumption of ardent spirits is happily small; butchers' meat is extensively consumed by them.

Locality, &c.—Some few persons had recently arrived in Birmingham, but by far the greater number had been resident here some years. With one or two exceptions the houses in which they resided were wholesome and well aired, each containing one family. There is perhaps no town of the same size in the world, in which the air is so freely admitted to the dwellings of the lower classes as in Birmingham. The same remark applies to the large manufactories, but not to the workshops of the smaller manufacturers, of which there are a great many in this place, some of them being close and unwholesome. The site of the town is elevated and its surface is very unequal, in consequence of which it is well drained, and soon washed clean by a heavy fall of rain. It is decidedly cold, and hence, the prevalence of bronchial irritation. Malignant fevers are but little known here. How far these circumstances may have modified the influenza, is a subject of interesting inquiry, which can only be satisfactorily prosecuted by a comparison between the epidemic as witnessed in this place and as observed in other large towns, differently situated as regards temperature, locality, &c. I could trace no connexion between the symptoms of the disease and the different localities of the town itself; but it is right to mention that sixty-five out of the hundred being Dispensary cases, occurred in a particular district, which, however, may be taken as a fair specimen of the town.

Habits, &c.—Thirty cases were furnished from the ranks of the wealthier classes of society, and seventy from the humbler classes, to whom it is an object to obtain medical attendance free of expense; hence they include persons in every grade and situation; members of the learned professions, manufacturers, tradesmen, mechanics, and domestic servants, with their respective families. I have not witnessed

any modification in the disease which could be referred to the situation of life, or habits of the parties, or to the different trades in which they were engaged. It must be confessed, however, that the number of cases is much too small for any weight to be attached to observations of this nature.

Contagion.—When a disease becomes so general as the influenza of this year, it seems impossible to find data from which to determine whether, when once introduced, it is capable of being communicated from one individual to another. To hazard even an opinion on this point, we must have seen groups of persons similarly circumstanced as regards their health, diet, habits, locality, &c., some of whom have been placed in the society of persons labouring under the disease, while others of them have been carefully excluded from it. In the absence of such information I have no opinion to offer upon the subject.

CLASS II.

The state of the different organs of the body, as discovered during lifetime by physical signs or by functional derangement.

It is certainly a matter of regret, that no opportunities should have been afforded of comparing the state of the organs in those persons who died, with the symptoms observed during lifetime. This blank may possibly be filled up by others. In the cases before us, however, it is less to be regretted, inasmuch as there was no fatal case in which the disease was not complicated with some other disorder; such was the fact in Mary Harvey's case. If she sank under the shock communicated to the nervous system, rather than from the effects of the disease of the lining membrane

of the bronchial tubes, in what manner would this have been revealed by any morbid appearances? I am also informed by Mr. Jones, the visiting surgeon, that both the other patients who died were the subjects of severe asthmatic attacks. My own examination of the chest in each case on the day preceding that on which they died, would lead me to the conclusion that the mucous membrane of the bronchial tubes was much affected, as sibilous and sonorous râles could be detected amidst the mucous or rather tracheal râle. In our endeavours to discover the seat of this disease, and to trace the organic changes on which depend the functional derangements which are observed in it; it is probable that (as in the case of some continued fevers) but little assistance would be afforded us by pathological anatomy. I would not be supposed for a moment to undervalue the importance of this science, under the light of which medical knowledge has of late made such immense progress, and which must ever form the chief basis of a rational and philosophical diagnosis; but as the organic changes in the nerves which occasion such extensive and varied functional derangements, have hitherto escaped the observation of the most talented and diligent investigators, we must naturally expect to meet with some complaints the symptoms of which (as in the case of tetanus) may be very marked during lifetime, but in which the nature of the organic lesion that has given rise to them cannot be discovered by pathological anatomy *as at present known.*

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1. STATE OF THE ALIMENTARY CANAL.

Mouth.—In case 10, the mucous membrane of the mouth and cheeks was very red and sore, and soon became covered with apthæ. In two or three cases the patients complained of dryness of the mouth and lips; no crust was observed on the lips.

Pharynx.—In a large majority of cases there was increased redness of the fauces and tonsils, which seemed the source of much irritation. In fifteen cases there was consi-

derable enlargement of the tonsils, accompanied by pain on deglutition. In only one case, that of pre-existing syphilis, was ulceration observed.

Tongue.—The tongue presented an appearance perfectly natural in fifteen cases, among which was that of Mary Harvey, who died. In forty-five cases the tongue was more or less covered by a white, and in thirty-nine cases by a soft, yellowish, brown fur. In case 10, the tongue was very sore, it was dry and brown in the middle, with bright red edges; when the brown coat disappeared the tongue remained for a long time sore, red, dry, and glazed; pain in the epigastric region, excessive nausea, but no vomiting accompanied this state of the tongue; upon the whole but little connexion could be traced between the state of the tongue and the symptoms of gastro-intestinal derangement. In some cases a natural appearance of the tongue was accompanied by much nausea and great constipation. In others, where the appearance of the tongue was very foul, the bowels acted with perfect regularity.

Nausea and Vomiting.—There was hardly a case in which nausea was not present in some stage or other of the complaint. In some few cases it set in from the first, and in two cases it continued for nearly three weeks after the disappearance of most of the other unpleasant symptoms. In four cases there was violent vomiting, and in one it was the first symptom. The matter vomited was chiefly bile; in two cases there were very foul eructations.

Anorexia.—In every case, there was almost a complete loss of appetite for three or four days. In case 18 and another, it continued for three weeks. Except in the first class, where the cough first appeared, it was one of the earliest symptoms.

Thirst.—In cases 2, 3, and 10, there was excessive thirst, accompanied by hot and dry skin and frequent pulse; and in 14 other cases. In cases 4, 5, 7, and twenty other cases, the feeling of thirst was increased, but it was not excessive. In sixty cases it was not at all increased.

Pain on Pressure.—Pain in the epigastric region was present in case 10. In five other cases there was slight pain on pressure of the abdomen.

Bowels.—In seventy cases the bowels were confined and had been so for some time previous to the attack. In ten of these cases they were excessively constipated, four, five, and even seven days intervening between each evacuation. One only proved obstinate, but being accompanied by much nausea and some bilious vomiting, there being no pain, and the abdomen being quite supple, an emetic of two grains of Tartarized Antimony was exhibited which produced vomiting and evacuations by stool, and was followed by great relief. In four cases diarrhœa was present; in one case lasting a week, in another four days; and in two others only two days. In twenty-six cases the bowels were perfectly regular from first to last. There was nothing remarkable in the appearance of the matter evacuated.

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2. STATE OF THE KIDNEYS.

The urine was in a great many cases thick, as in a common catarrh, or after a heavy supper. In a few cases it was very high coloured, and deposited a reddish sediment.

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3. STATE OF THE LIVER.

We have seen that there were one or two cases of bilious vomiting, and one or two of bilious diarrhœa; and that the secretion or flow of the bile was retarded, in some cases, when the patients were approaching to convalescence. I did not observe the slightest trace of jaundice.

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4. STATE OF THE ORGANS OF CIRCULATION.

Action and sounds of the Heart.—In listening to the action and sounds of the heart, I have found its action to correspond with the pulsation of the artery in the wrists, as regards force, frequence and regularity, with the exception of one or two of the cases in which the action or sounds of the

heart gave indications of disease. These were case 4, John Hathersich; case 8, William Wheeler, and two in which similar sounds to those and Wheeler's case were heard, viz. John Wells, aged 33, lapidary, Mary street, and Elizabeth Witheridge, housewife, Lawrence-street, Jane James, and Mr. L. John Wells, Elizabeth Witheridge, and Jane James, were under my care previous to their attack of influenza, and I have examined them since their recovery. The auscultatory signs furnished by the heart are the same as they were before the attack. John Hathersich, William Wheeler, and Mr. L., I saw for the first time soon after they were attacked with the influenza. I have examined them since their recovery from it, the signs remain the same; and as the morbid condition of the heart which they indicate are chronic affections, we may conclude that they were not produced by the influenza. From this it follows, that in this complaint no alteration in the sounds or action of the heart was observed by me which did not previously exist.

Pulse.—The pulse was never decidedly heard as in cases of active pleuritis. In case 3, and a few similar cases, it approached the nearest to this state: they were persons of a full sanguineous habit. In a few cases there was a fullness of the pulse, as in case 2. The pulse of the great majority was small, feeble and sharp at the onset. It soon, however, become soft in most cases, but continued small and feeble for a long time; even in the case of pneumonia there was no fullness. In two cases the pulse was very irregular; in case 9, the day before the death of the patient, and in case 7, on the 2nd of February, the day she was at the worst.

In case 9, the pulse reached 136 the day before death; and in case 7, 126 on February 2. In case 12, a phthisical subject, it was 130.

In no other case did it exceed 110, and in the majority of cases it never passed 100. In the two hysterical cases it never rose above 76, although the patients complained of excruciating pain.

Skin.—When the pulse was accelerated beyond 80, it was accompanied by more or less of heat and dryness of skin, and thirst.

As regards the increased temperature of the surface of the body, I observed it more or less in all those cases which commenced with rigors; it was not continuous, but succeeded the chills. In cases 2 and 3, commencing with headache, pains in limbs, &c. it was considerable for a day or two.

In some weakly patients there was a constant sensation of cold, but I never actually proved the temperature of the body.

In forty cases I observed no sensible alteration in this respect, and in sixty, the skin was more or less hot. The degree of dryness, or moisture of the skin, seemed to bear an exact ratio to the elevation of the temperature and the frequence of the pulse, with very few exceptions. In those cases where there was much frequence of pulse, an elevated temperature, and a dry state of the surface, I observed that when perspiration was induced freely, the febrile symptoms became much less marked, and the patients, although weak, soon lost most of their unpleasant sensations.

Two cases commenced with cold perspirations, and during the continuance of the illness, perspiration constantly recurred.

STATE OF THE ORGANS OF RESPIRATION.

Since the introduction of auscultation of the chest by Laennec, there are no organs the state of which can be more clearly ascertained during lifetime than those of respiration. The signs which enable the physician to form his diagnosis are furnished by the cough, the expectoration, the respiration, the sensations of the patient, and by percussion and auscultation of the chest. To these, however, should

be added the general symptoms of derangement in the nervous system and the the organs of circulation, digestion, &c. to which disease of the chest may give rise, but which taken by themselves, are of no value whatever.

Cough.—In *all* cases cough was present. In seven cases, five of which were previously in good health, one was labouring under phthisis, and one under asthma, it was the first symptom. In other cases it shewed itself from the first to the seventh day. In every case it was violent for at least two days; in many cases it was prolonged for two or three weeks, assuming a convulsive character, and coming on in fits, several times during the day.

Expectoration.—As soon as the expectoration became copious and easy, the pain and uneasiness produced by the cough were much diminished. In all the cases in which the patients were in good health at the time of their attack, the expectoration was a clear mucus; and when the mucous râle existed it was very viscous. During convalescence a yellowish tinge might be observed. In six cases it was streaked with blood. In those persons previously afflicted with asthma, it was viscous and occasionally very tenacious when the symptoms of bronchitis ran high, and more or less lumpy in all. In those who were the subjects of chronic catarrh, it was muco-purulent. In one or two cases it ceased for a short time. In case 17, it became characteristic of pneumonia during convalescence from influenza.

Respiration.—Of the sixty-five patients in good health at the time of their attack, four suffered slight, and two very severe dyspnœa. In the former cases, however, respiration never exceeded 28 in the minute. In one of the latter it reached 46. In this case, there were present all the signs of acute bronchitis. In the other, (case 4) although the patient considered himself in good health at the period of the attack, there is great reason to believe that hypertrophy of the heart, with some emphysema of the lungs, existed.

In all the fifteen asthmatic cases, dyspnœa was at one period most urgent and formed the most prominent symptom; respiration varying from 36 to 44 in the minute. In the phthisical and other cases, there was but little dyspnœa or increased frequence of respiration.

Sensations of the Patients.—For about two days, all experienced more or less pain under the sternum upon coughing, and in some this unpleasant sensation was prolonged for some days more. Many had a sense of tightness and constriction about the chest.

Percussion and Auscultation.—The chest sounded clear on percussion in every case, except that of Elizabeth Gadd, in which pneumonia appeared accompanied by dullness. In three of the asthmatic cases, some parts of the chest sounded clearer than others; more especially in those of Mary Harvey and Phœbe Williams. In the same spots the respiration was either very feeble or null. Little doubt can therefore be entertained of the existence of emphysema in those spots.

In every case, but that where pneumonia was present, respiration, when heard, was clear and vesicular. Bronchial respiration was not once heard. It was often feeble, it is true, as in the cases alluded to above, and it was often observed by râles, which I shall now proceed to notice.

Râles.—In seventy-five cases, no râle whatever was heard. In three cases, slight sibilous and sonorous râles were heard; and in eighteen cases, (four of them previously in good health and fourteen asthmatic) these râles were very marked. Mucous gurgling was heard in three phthisical cases, unaccompanied by any other râle; in eighteen asthmatic persons, and in two previously healthy, the mucous râle was joined with sibilous and sonorous râles. In the case of Jane James and William Wheeler, the sub-crepitant râle was heard with sonorous and sibilous râles. In Gadd's case there was crepitant râle.

It appears therefore that there were

	Cases.
No râles, in	75
Sibilous and sonorous râles, alone, in	5
Sibilous, sonorous and mucous râles, in	14
Sibilous, sonorous and sub-crepitant râles, in	2
Mucous gurgling, alone, in	3
Crepitant râle, in	1
	100

I have united the sibilous and sonorous râles because I have always heard them together. Indeed I cannot understand the object of those authors who lay great stress on the distinction between them: they evidently indicate the same morbid state of the organs of respiration, that is, a congestion of the mucous membrane, or the presence of thick lumpy mucus, and in most cases both; and the variety in sound is probably caused by the difference of the calibre of the tubes in which they are formed.

The mucous râle was heard in seventeen cases; if from these we deduct the three cases of phthisis, in which the gurgling arose from a cavity in the lungs existing previous to the appearance of the influenza, and one case (that of Mary Harvey) in which I have supposed it to be caused by weakness and approaching death, rather than by bronchitis, we shall have thirteen cases in which it may be considered as denoting inflammation of the lining membrane of the bronchial tubes.

We have, therefore, seventy-nine cases in which irritation of the mucous membrane of the bronchial tubes was present with increased secretion of mucus; eight in which there was considerable congestion of this membrane with increased secretion, consisting chiefly of thick lumpy mucus; and thirteen in which inflammation was present, with considerable secretion of viscous or muco-purulent fluid in the majority of cases.

The crepitant râle was heard in the case of Elizabeth Gadd, when recovering from the attack of pneumonia which came on during her convalesence from the influenza. Four days intervened between my seeing her very much improved and my finding her in the second stage of pneumonia. There was no crepitant râle; hepatisation having commenced, as was proved by the dullness on percussion and bronchophony. There is nothing in this case to prove that the bronchial irritation had extended to the parenchymatous structure of the lungs, as it had apparently subsided. The pneumonia seems to have suddenly come on during her recovery, as it sometimes does in cases of continued fever.

The sub-crepitant râle* was heard in only two cases, those of William Wheeler and Jane James, in both of which an obstacle to the free return of the blood may fairly be supposed to exist. In the former case the dilatation of the heart, at the expense of the thickness and substance of its parietes must have had the effect of imparing its energy and of preventing its emptying itself of its contents at each stroke. Such is indeed the fact; the pulse was extremely irregular in power and feeble, and the impulse of the heart

* By the sub-crepitant râle I understand a râle between the dry pneumonic crepitant râle and the mucous râle; moister, larger and more uneven than the one, and dryer, smaller and more regular than the other. While the air cells are the seat of the crepitant râle, and the larger and middle sized bronchial tubes that of the mucous râle, the sub-crepitant râle takes place in the smallest of these tubes. Of this I entertain no doubt, because I have succeeded in constructing and arranging a set of tubes in such a manner that I can produce all the râles of the chest at will; in which experiments it is clearly shewn, that the variety in these râles depends upon the different sizes of the bubbles which form and burst during their production, and which, in their turn, depend upon the calibre of the tubes in which they are formed, and in some measure upon the degree of intensity of the fluid contained in them.

It is heard in some cases of pulmonary apoplexy, but especially in œdema of the lungs, in some asthmatic cases, and in many typhoid fevers.

was not felt. Should any person, therefore, be disposed to doubt the correctness of the inference drawn as to the cause of such weak action, still the effects remain the same, and an impediment to the free return of the blood from the lungs must be the result.

In the case of Jane James, the obstruction probably arises from a narrowing of the left auriculo-venticular opening. The constant saw or rasp sound, accompanied by purring thrill, I have found certain indications of valvular disease. As this patient has been subject to articular rheumatism, the thickening of the valves is probably the result of eudocarditis, which more usually affects the mitral valve and the lining membrane of the left auricle than any other part of the heart. Such, at least, is the result afforded by numerous cases of this kind which have fallen under my notice.

Now this existence of sub-crepitant râle, with obstruction to the free return of the blood to the heart, agrees with what I have observed in sixty thoracic cases, of which I have full notes. In every case in which this râle was heard, an inspection of the body shewed an obstruction in the heart, or, at least, afforded a reason equally satisfactory. For instance, in two cases in which it was heard, accompanied by an extremely feeble, irregular pulse, there was ossification of the coronary arteries, which greatly effects the energy of the heart's action. Should this fact be confirmed by more extensive researches, it may be concluded that, with the exception of the active congestion which terminates in pulmonary apoplexy, the sub-crepitant râle arises from the air traversing the thinner portions of the blood which has escaped from its vessels into the smaller branches of the bronchial tubes; and, that such exudation is caused by a fullness of the vessels, which are prevented emptying themselves into the heart so completely as they do in a healthy state of that organ. If such be the case, of how great importance must be the distinction between this râle and the crepitant râle of pneumonia! the one being

asthenic and the other sthenic, the treatment suitable for one case could hardly fail to produce the most serious consequences in the other. In cases of asthma, it would lead us to direct our attention to the organs of circulation, in which, in a great majority of cases, reside the causes of asthma. In most cases of this kind, in which I have heard the sub-crepitant râle, I have been enabled to detect symptoms of derangement in the heart, but in some others I have entirely failed in doing so. But we must not conclude that it does not exist; I may not be possessed of sufficient skill to discover it, or the indications may not exist. Thus, in the case in which ossification of the coronal arteries was found after death, there were no positive signs in life time by which cardiac affection could be recognised. In cases of typhus fever, it is well known that the circulation is very low and feeble, being probably affected through the nervous system, and hence the sub-crepitant râle. This râle may, therefore, become a much more valuable sign than it has hitherto been considered.

STATE OF THE NERVOUS SYSTEM.

The symptoms of derangement in the nervous system were present in all cases, varying but slightly as to the time of their appearance but more so as to their intensity. Thus in class I. they were preceded a few hours by cough, and in class III. by rigors. In class II. they were the first signs of illness which were observed. They varied from a slight headache, lassitude, giddiness, &c. to excessive headache, great prostration of strength and occasional delirium. In ten cases delirium occurred during the night, but none of the patients were violent in their actions. I am not able to furnish cases in which they were carried to such a height as to give the character of a severe typhoid affection to the complaint; it is probable that they would occur much more

frequently in those places where typhoid fevers are more prevalent than they are here. These derangements of the nervous system cannot be supposed to result from the affection of the mucous membrane of the trachea and bronchial tubes or from the rigors of the third class; because they appeared in a very short time after the latter had been manifested. If such were the case, why is not every slight attack of cough, and every chill, immediately followed by similar affections? We cannot for a moment suppose this to be the case, and therefore it must be allowed, I think, that there was a primary derangement in the nervous system, and that it formed a leading feature of this disease.* After the first few hours, and in many cases from the first, its symptoms were constantly present, and they remained after every trace of irritation of the gastro-pulmonary mucous membrane had disappeared; lassitude and pains in the back and limbs were generally the first to appear, but there was not much regularity in the order of their appearance. There were few cases, however, in which all the following symptoms were not present at some stage or other of the complaint:—headache, dizziness, vertigo, lassitude, pains in limbs and back, and in some cases faintings, others delirium, and in some tinnitus,

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SENSES.

Sight.—In three cases, where violent headache was present, the eyes were painfully affected, and the light produced much uneasiness.

Smell and Taste.—In many cases the sense of smell and taste were much diminished, and in others perverted.

* We can hardly conceive derangement in the nervous system to exist, without its being communicated in some degree to the organs of digestion through means of the ganglionic system; and hence it is probable that the functional derangements of these organs are in this case dependent upon primary affection of the nervous centres.

Hearing.—In four cases where severe cold in the head had existed, a considerable degree of deafness still remains.

CHAP. III.

Treatment.

A knowledge of the seat and nature of the organic lesion which has taken place in any disease is a great step towards the adoption of a rational treatment of it. Thus in pleuritis, a physiological and generally successful treatment results from a knowledge that the various symptoms observed in it are caused by an inflammatory state of the pleura. It may happen, however, that while satisfactory evidence of the lesion of some organ is afforded by derangements in its functions, the particular nature of such lesion may be entirely hidden from us. A review of the simple cases of influenza would lead us to conclude such to be the case in that complaint. The derangements observed in the functions of the nervous system, of the organs of respiration and of digestion, as also some physical signs as regards the two latter, point to the nervous system, to the pulmonary mucous membrane and to the organs of digestion, as more or less affected; but we have no occular demonstration of such affections, and therefore we know nothing of their nature.

In the absence of such information we are led to inquire what treatment has been most successfully adopted on former occasions; but even were the descriptions of former epidemics clear and concise, and could we recognise in them all the features of that of this year, still there is no one peculiar mode of treatment which has proved eminently successful above others; we are compelled, therefore, to take the *symptoms* as the basis of our treatment.

Now in the simple form of this disease, as seen in cases 1 and 2, what can be more clearly indicated than the mildest possible treatment? Accordingly, such has been adopted; the disease has been watched and moderate diet has been prescribed. When there was a continuance or aggravation of functional derangement, such medicines were prescribed as have been found, by experience, to exercise a beneficial influence upon the different organs, by inducing in them a return to healthy action. When, however, the disease was complicated with others, as for for instance, with congestion or inflammation of the lining membrane of the air tubes, the treatment was necessarily modified by such complication.

Among the symptoms furnished by the state of the alimentary canal, irregularity in the action of the bowels, vomiting, nausea, and foulness of the tongue, were those which seemed to indicate the employment of medicines. Thus, in simple constipation, mild laxatives were ordered. In one case of diarrhœa, in which much irritation of the mucous membrane of the large intestines was manifested, enemas of starch and laudanum were administered. In two cases of bilious diarrhœa mucilaginous drinks only were given. When the tongue was covered with a thick, soft, fur, and when much nausea and vomiting was present, a brisk emetic produced a great amendment; and where constipation was found, joined with a similar state of the tongue, anorexia, headache, &c., purgatives were administered. In case 10, however, where the tongue was very red, with a dark brown, dry coat in the middle, and where there wus much pain on pressure over the epigastric region, counter-irritation and diluent drinks were employed. Thus, as has been proved by Mons. Andral, the state of the tongue affords valuable indications for treatment, although it does not point out the nature of the lesions of the digestive organs. The indications afforded by loss of appetite and by thirst are so obvious and simple as to require no notice here. The appetite,

however, in some cases remained impaired for a considerable time, accompanied by painful sensations in the region of the stomach after taking food; in such cases the administration of mild bitter medicines was followed by very beneficial results.

When a deficiency of bile was observed in the stools, alterative doses of Pil. Hydarg. were joined with mild aperients.

In those cases where the urine was very high coloured, and deposited a reddish sediment, abstinence was enforced, and mucilaginous drinks were ordered; as the irritation of the kidneys was supposed to be excited by that of the alimentary canal.

In the majority of cases that fall under the notice of the physician, the state of the pulse when taken alone, would be of little value in enabling him to decide upon the treatment he should employ. It may, it is true, be so very small and feeble as to counter-indicate depletion, and it may be so full, hard and frequent, as to imply the necessity for venesection. Although the pulse, in many cases, bore the former character, it never once united all the conditions of the latter. It was never decidedly hard, scarcely ever full; but, in most cases, it was more or less small and feeble. Nor was there any reason for supposing, that the smallness of the pulse arose from a concentration of the circulation upon some internal organ in a state of inflammation, except that in a certain number of cases bronchitis existed. In no case, therefore, was venesection indicated by the state of the pulse, and in the great majority, the injurious tendency of such a practice might be clearly foreseen.

In two cases of inflammation of the fauces leeches were applied; being the only cases in which blood was taken from the system in any way whatever.

When the skin was hot and dry, and the pulse frequent, saline drinks, and diaphoretic medicines, such as James's or Dover's powders were given.

Among the symptoms of derangement in the respiratory organs which demanded attention, were the cough, the pain in the chest, and the expectoration.

While the cough remained moderate no notice was taken of it, but when it became troublesome, followed by little or no expectoration and a sensation of tightness, sedative and expectorant medicines were adminisistered, such were Hyoscyamus or Syr. Papaveris, and Oxymel Scillæ or Vin. Ipecacuanhæ.

When the pain in the chest, and the sensation of rawness or constriction became severe, an Emplast. Calefaciens or an Emplast. Lyttæ was applied to the chest.

But it has been seen that the cough became often convulsive; in all these cases, Hydrocyanic Acid in doses of one minim, proved very serviceable.

When, however, the signs furnished by percussion and auscultation of the chest, gave notice of the congestion of the lining membrane of the bronchial tubes, which took place in all those cases where asthma had pre-existed, sinapisms or blisters were freely applied to the surface, and moderate doses of Æthereal Tincture of Lobelia were combined with Ipecacuanha Wine; and in some cases of difficult expectoration, and where the mucus was thick and lumpy, small quantities of the Sub-carbonate of Soda were added.

We now come to the treatment in those cases where bronchitis was present. In the autumn of 1836, bronchitis was very prevalent. Having in some cases ordered venesection and found it to be followed by no relief, I resolved upon trying large doses of the Tinct. Lobel. Æther. I had witnessed the operation of small doses of this medicine for some years, in cases of chronic bronchitis. It seemed to me to controul, in some manner, the supply of blood sent to the lungs* Hence, I thought it possible, that large doses, re-

* Of the exact modus operandi of this medicine little can be known. It does not appear to depress the pulse like Digitalis. It is supposed to be a narcotic, and probably acts upon the organs of circulation through the nervous system.

peated at small intervals, might have a beneficial effect in acute bronchitis, and those sudden aggravations of chronic bronchitis which so often prove fatal. I proceed to detail the two first cases in which it was thus employed.

Case 19.—Mrs. A., æt. 60, shopkeeper, a very corpulent person, came under my care November 5, 1836.

She had been subject to palpitations of the heart and asthma for some years, and had consulted me on this account in the summer. At that time there was constant bellows sound under the left mamma, accompanying the first sound of the heart; the second sound seemed very distant, and the stethescope was strongly heaved up by each stroke of the heart. The action of the heart and the pulse were both intermittent. A week since, she caught cold by opening her window in the night and remaining at it for some time; since then she has had a cough with great difficulty in breathing.

On the morning of November the 4th she sent for a surgeon, who placed a blister on her chest, and purged her freely, by which she was relieved for a few hours.

Her cough is now very troublesome, and dyspnœa is urgent; she cannot lie down; feels much pain under the sternum when she coughs, and experiences a strong sensation of constriction across the chest. Action of the heart is distant, with bellows sound; percussion clear; respiration 40, with sonorous and sibilous râle, and mucous râle in patches; pulse is irregular, not hard; expectoration scanty, consisting of clear mucus, with streaks of blood in it occasionally. [*Antim. Tart.* gr. $\frac{1}{8}$, *Syr. Papav.* ʒ j. *Aquæ*, ℥ jss. *alterâ quâque horâ.—Hydrarg. c. Creta*, gr. ijss. *Pulv. Ipecac. comp.* gr. ijss. *4tis horis.—V. S. ad* ℥ x.]

Nov. 6. She experienced temporary relief from the venesection; dyspnœa is now very urgent; there is much more mucous râle than there was; the expectoration is more viscous and tenacious; anxiety great; pulse intermits; pain and swelling in both knees; urine scanty; legs œdematous.

[*Tinct. Lobel. Æther.* ♏ xxv. *Vin. Ipecac.* ♏ xv. *Potassæ Nit.* ℈ j. *Aquæ,* ℥ ij. *tertiis horis.—Pil. Hydrarg.* gr. x. *Opii,* gr. ¼, *tertiis horis.*]

In the evening she was much relieved. [*Pulv. Ipecac. comp.* gr. viij. *omni nocte, et perstet.*]

7. Amazingly better; breathing is quite comfortable, 28; Hardly any mucous râle; expectoration yellowish; pain in the knees. [*Perstet in usu Pil. bis die, et Mist. quartis horis.—Lin. Saponis c. Opio.—Pulv. Ipecac. comp.* gr. vij. *omni nocte.*]

The treatment from this time does not bear upon the subject under consideration. The patient went on well and soon recovered her usual health.

In this case, the improvement may be attributed to the mercury, which, probably, was chiefly useful in relieving the rheumatic affection of the knees. In the following case, the Lobelia was administered alone.

Case 20.—Thomas Shrawley, æt. 69, shoemaker, Woodcock-street, was admitted a home patient of the Birmingham Dispensary, November 3, 1836.

Has lived very temperately, but for some years has been subject to a shortness of breath,and has expectorated lumpy, pearly mucus. Has had a bad cough for the last six weeks, accompanied by copious yellowish expectoration, and occasional headaches. Countenance is rather livid; great thirst; tongue rather foul; bowels are regular; pulse is full and hard; experiences much dyspnœa, and has a sharp pain at the bottom of the left outer side of the chest, which he feels chiefly on inspiration; he can, however, draw a tolerably deep breath. Percussion is more than usually clear over a small space, three inches below the right clavicle; respiration is feeble in that point, otherwise natural; voice unaltered; action of the heart natural. [*V. S. ad* ℥ viij.—*Hirud.* viij. *later. sinist.—Vin. Ipecac.* ♏ xv. *Mist. Salin.* ℥ jss. *quartis horis.*]

Nov. 5. Has lost the pain in his side, but the dyspnœa has increased; pulse 130, small and sharp, but not so hard as before; mucous râle is heard at the base of each lung; expectoration is very copious; it seems to vary at different times, as in one vessel it is muco-purulent, of a yellowish green colour and almost homogeneous; in another, the sputa are round and distinct, of the same colour, floating in a great quantity of thin fluid resembling whey. [*Tinct. Lobeliæ Æther.* ♏ x. *Aquæ distil.* ℥ ij.]

This dose was, after two hours, increased to twenty minims, and in two more, to half a drachm, which was persevered in every other hour.

7. Very much better; expectoration is much less; pulse natural.

11. Nearly well. [*Diminish the quantity and frequence of the doses.*]

Soon well as usual.

The same treatment was adopted in fifteen cases similar to one or other of the two which have just been detailed, with the same results. Under these circumstances it was employed in the thirteen cases in which the influenza was complicated with bronchitis. In most cases, however, counter-irritation was used at the same time, by means of blisters applied to the surface of the chest.

Some symptoms of nervous derangement called for the administration of medicine. Thus when head-ache was violent and was accompanied by restlessness and irritability, sedatives, such as Hyoscyamus or Muriate of Morphia were given; and where great lassitude, depression, and fainting fits occurred, diffusible stimulants, such as the Spir. Ammon. Arom. were found very beneficial. It was found necessary to have recourse to tonics in a much earlier stage of this complaint than most others. Sulphate of Quinine was the medicine usually employed, often in conjunction with the Sulphate of Iron and Extract of Gentian. Such is the compound Quinine Pill so often prescribed.

When constipation was joined to symptoms of weakness, Capsicum and Myrrh and Aloes were combined with these ingredients.

It has been shewn that the state of the pulse alone forbad the employment of venesection in *most* cases, but when taken in conjunction with the symptoms of nervous derangement, it prevented my *ever* having recourse to it.

In all cases the feet were kept warm, and the patients were cautioned against exposure to cold. The modifications in the treatment, as required by the complication of other disorders with the influenza, will have been observed in the cases recorded and require no notice here.

Such are the symptoms of the influenza, as observed in these cases, and such has been the treatment employed in it. Mild, and unattended with danger in its simple form, it has occasionally lit up the smouldering embers of chronic disease into a flame, which not only proved dangerous, but, in some cases, fatal to those whom it attacked. No age was exempt from it; nor does it appear that previous habits, diet, or locality, exercised any influence in hastening or retarding its spread. No opportunities for ascertaining the seat of the disease have been afforded by post mortem examination. Had it been otherwise, judging from the symptoms observed during life time, there is no reason to suppose that, in the present state of our knowledge, any positive organic lesion would have been discovered, beyond the signs of irritation of the pulmonary mucous membrane in some cases, and its inflammation in others. It is unnecessary to recapitulate the symptoms in the order in which they appeared; a reference to their analysis will shew that those of nervous affection took the lead, and were accompanied by slight functional derangements in the organs of digestion, circulation, &c., and by constant irritation, amounting in some cases to inflammation of the pulmonary mucous

membrane. We can hardly fail to trace a strong resemblance between this complaint, in its simple form, and those cases of mild continued fever, which, from the predominance of the symptoms of nervous affection, are called *nervous fevers.** But the resemblance, although strong, is not perfect. In neither case, certainly, do the symptoms of gastro-intestinal derangement run high, and they may be the result of the nervous affection communicated by means of the intermediate nerves to the ganglionic system; and in both the pulmonary mucous membrane is affected. But, is it affected in the same manner and degree in each complaint? In determining this question, auscultation and percussion of the chest are of great value to us. We know that in continued and typhoid fevers, bronchial irritation often exists in the early stage of the complaint, and that, in a more advanced stage, it usually, either disappears, or is transferred to the parenchyma of the lungs, producing engorgement of the cellular structure, and sometimes pneumonia. It is true that such pneumonia is often said to be latent, that is, devoid of the usual characteristic signs derived from the sputa, the pulse, the respiration, &c. but, *no pneumonia can really remain latent, where auscultation and percussion of the chest have been carefully and skilfully practised.*

Now whilst constant irritation of the lining membrane of the bronchial tubes was observed in every one of the one hundred and eighty persons who laboured under influenza, and in many cases ran on to inflammation, in only one case was it followed by pneumonia; and then this latter disease did not make its appearance until the irritation of the mucous membrane had, in a great measure, subsided. In the five cases of phthisis, too, a complaint in which pneumonia is apt

*This expression is used because it is generally understood, and not under the idea that the seat of *all* those diseases in which organic lesion cannot be discovered after death is in the nervous system. This cannot be admitted without proof.

to take place, we find only one in which there can be any suspicion of its having been induced by the influenza. Even that is very doubtful; for in many simple cases of phthisis, hepatisation of the lungs takes place to a much greater extent, in a less time.

In the generality of fevers then, the irritation of the pulmonary mucous membrane is often propagated to the parenchyma of the lungs, and produces pneumonia; but in the influenza, as observed here, it goes on to inflammation of the mucous membrane itself. This cannot be accounted for on the score of climate, as not only bronchitis, but pneumonia and pleurisy prevail to a much greater extent in this town than in others in more southern latitudes, or more sheltered situations.

But percussion and auscultation of the chest have assisted us still further, by enabling us to account for some peculiar forms under which the disease appeared; teaching us that they depended upon pre-existing disease. Such were those cases which were complicated with diseases of the heart or large vessels; and, in all the asthmatic cases but one, the subsequent exploration of the chest has proved the pre-existence of confirmed chronic disease, either in the organs of respiration, or in those of circulation, which are so intimately connected with them. The case I allude to, in which no disease could be detected, was that of a middle aged female who, almost from childhood, has been subject to violent attacks of asthma. It is probable that the cause of these attacks lies in the respiratory nerves.

The treatment employed, in the simple forms of the disease, was such as to assist nature, but not to coerce her. With the exception of the case in which pneumonia came on, during convalescence, there was no reason to suspect that any other internal inflammation had arisen than that of the lining membrane of the bronchial tubes. Of the treatment employed when such was the case, I have only to remark that, reasoning from the experience of the effects of

Lobelia, in chronic bronchitis, it seemed likely to be successful, and that it proved so. But I have seen it fail, more particularly when administered in a concentrated form; it seems to act most surely when each dose is diluted with at least two ounces of water, or some other bland fluid. It is not my wish to proclaim it as a certain cure for acute bronchitis; but it has appeared useful, and may be worthy of a more extended trial.

The influenza has now disappeared, except that a few isolated cases occasionally occur: but a sufficient time has hardly elapsed, (even since the recovery of those who were among the first to be attacked with it) for a correct opinion to be given, as to its effects upon the constitution. Some persons appear to have entirely recovered, while a great number still labour under considerable debility, and many, still retain some cough.

The following conclusions seem to result from our investigation:—

1. The influenza, as observed at Birmingham, is an affection of the nervous system, with its concomitant derangements in the organs of digestion, circulation, &c. commonly known under the name of *nervous fever;* accompanied, *throughout its whole course,* by irritation of the pulmonary mucous membrane.

2. This irritation, not unfrequently, amounted to congestion, and even to inflammation.

3. The influenza was modified by pre-existing disease, more particularly by chronic bronchitis, the subjects of which were rendered liable to the acute form of that disease.

4. Neither locality, previous habits, or diet, acted as pre-disposing causes.

5. In simple, uncomplicated cases, mild treatment alone was sufficient.

5. When bronchitis was present, counter-irritation, and large doses of Ætherial Tincture of Lobelia, repeated at short intervals, seemed useful.

7. Venesection was always counter-indicated.

8. It was often necessary to have recourse to diffusible stimulants, at the commencement of the complaint, and to administer tonic medicines in an early stage of it.

9. It only proved fatal in those cases where the persons it attacked had been enfeebled by old age or chronic disease.

Printed by James Belcher and Son, High-street, Birmingham.

The reader is requested to correct with the pen the following errata :—

p. 21, l. 10, *for* clear *read* clean
p. 40, l. 19, *for* heard *read* hard
p. 45, l. 12 of note, *for* intensity *read* viscosity
p. 46, l. 24, *for* effects *read* affects

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